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Abstract:

**Method of Determining Forces and Torques Acting on a Riding  
Vehicle**

The present invention relates to a method of determining forces and torques acting on a riding vehicle. The invention is characterized in that measuring signals from acceleration sensors are evaluated which are fitted, preferably in longitudinal, transverse and vertical alignment, to one or more selected points on the vehicle, and that other signals are evaluated which represent the spatial angular velocity of the vehicle and its time derivative (rolling, pitching and/or yaw velocity and rolling, pitching and/or yaw acceleration) or at least some of these variables, and that a mathematic model of the vehicle is provided in which forces and torques acting on the vehicle or at least selected components of these forces and torques are determined from the sensor signals.

(Figure 1)